CLAIMS

1. Hydrofluoroethers of formula:

$$T\text{-}CFX'\text{-}O\text{-}R_f\text{-}CFX\text{-}T' \qquad (II)$$

wherein:

T = CH_3;

X, X', equal to or different from each other, are selected between F, CF_3;

T' = F, Cl, H, C_1-C_3 perfluoroalkyl, CH_3, CH_2OH, COCl, CHO, CO_2H;

R_f is selected from:

- C_2-C_{15} perfluoroalkylene;
- $-(C_2F_4O)_m(CF_2CF(CF_3)O)_n(CF_2O)_p(CF(CF_3)O)_q-$

  wherein

  the sum n+m+p+q ranges from 2 to 200,

  the (p+q)/(m+n+p+q) ratio is lower than or equal to 10:100, preferably comprised between 0.5:100 and 4:100, the n/m ratio ranges from 0.2 to 6, preferably from 0.5 to 3; m, n, p, q are equal to or different from each other and when m, n range from 1 to 100, preferably from 1 to 80, then p, q range from 0 to 80, preferably from 0 to 50; the units with n, m, p, q indexes being statistically distributed along the chain;
- $-(CF_2CF_2CF_2O)_r-$ wherein r ranges from 2 to 200,

- $-(CF(CF_3)CF_2O)_s-$ wherein s ranges from 2 to 200,

2. A process according to claim 1, wherein R_f is selected from the following structures:

$-(CF_2CF_2O)_m-(CF_2O)_p-$,

$-(CF_2CF(CF_3)O)_n-(CF_2O)_p-(CF(CF_3)O)_q$

3. A process for the preparation of the formula (II) compounds of claim 1 comprising the reduction of the formula (III) corresponding precursors:

$$T''-CFX'-O-R_f-CFX-T''' \qquad (III)$$

wherein:

T'' = COCl,

T''' = F, C_1-C_3 perfluoroalkyl, COCl, H, Cl,

X, X', R_f are as defined in formula (II) of claim 1, carried out with gaseous hydrogen in the presence of a catalyst formed by supported platinum, preferably on metal fluorides, preferably in the presence of inert solvents, at a temperature in the range 20°C-150°C, preferably 80°C-120°C, at a pressure between 1 and 50 atm, preferably between 1 and 10 atm.

4. A process according to claim 3, wherein the metal fluorides are selected from the group formed by CaF_2, BaF_2, MgF_2, AlF_3, more preferably CaF_2.

5. A process according to claims 3-4, wherein the Pt concentration on the support is comprised beteeen 0.1%

and 10% with respect to the total weight of the catalyst, preferably between 1% and 2% by weight.

6. A process according to claims 3-5, wherein the catalyst is used in an amount in the range 1%-100%, preferably 10%-100% by weight with respect to the weight of the formula (III) compound.

7. A process according to claims 3-6, wherein the inert solvent is selected among perfluorotetrahydrofuran, perfluorotetrahydropyran, or their mixtures.